

Original Research Article

Domperidone prescribing in the outpatient setting in Al-Kharj

ABSTRACT

Aim: This study aimed to describe domperidone prescribing in the outpatient setting in Al-Kharj.

Methodology: This is a retrospective study that includes reviewing the electronic prescriptions of domperidone among outpatients in a governmental hospital in Alkharj.

Results: During the study period between January 2018 to June 2018, 173 patients received domperidone. More than 54% of the patients were males and the age of most of them was less than 20 years (61.85%). More than 27% of the patients used domperidone for 3 days and 23.12% of them used it for 7 days. Most of the prescriptions were written by residents (97.11%) and most of the prescriptions were prescribed by emergency department (89.02%).

Conclusion: The present study showed that domperidone was prescribed commonly in the outpatient setting. More studies are needed to explore the frequency of its prescribing in other settings and to explore the appropriateness of its use in different settings.

Keywords: Domperidone, outpatient, prescribing, use.

INTRODUCTION

Multiple neurohumoural pathways can induce vomiting and nausea. Key foci include the chemoreceptor trigger zone and the vomiting centre in the medulla [1]. The emetic response is mediated through several neurotransmitters including dopamine, histamine, serotonin, neurokinin, and acetylcholine [2].

Antiemetic medications are medicines that ease vomiting or nausea. They work by blocking neurotransmitters, which send information about vomiting and nausea to the brain. Blocking their signals can prevent the occurrence of nausea and vomiting [3]. The main antiemetic classes include antagonists of the serotonin, histamine, dopamine, muscarinic and neurokinin systems, benzodiazepines, and corticosteroids [4]. The efficacy of these antiemetics appears to be dissimilar for different indications [4].

Domperidone is an Anti-emetic agent. It helps the treatment of vomiting and nausea [5]. Domperidone is a dopamine receptor antagonist [6] that increases the contractions or movements of the bowel and the stomach [7]. It should be used for managing vomiting and nausea in children over 12 years of age and in adults [8].

Domperidone may be associated with an increased risk of heart rhythm disorder, principally in older people and is recommended for short-term use only [8]. Due to safety concerns, domperidone isn't to be used by breast-feeding women to increase breast milk production [9]. Side effects of domperidone include dry mouth that occur commonly in addition to several uncommon side effects such as anxiety, headache, diarrhea, rash, breast pain, and asthenia [10]. Because this medicine enhances the movement in the digestive tract, it may affect the absorption and action of other medicines [9].

The study of prescribing pattern is vital because it gives an idea to the physicians about the monitoring and the assessment of the medicines and endorses the needed modifications [11]. This study aimed to describe domperidone prescribing in the outpatient setting in Al-Kharj.

METHODOLOGY

This is a retrospective study that includes reviewing the electronic prescriptions of domperidone among outpatients in a governmental hospital in Alkharj. The inclusion criteria included the outpatient

prescriptions that contained domperidone. Inpatient prescriptions in addition to the outpatient prescriptions that didn't contain an domperidone were excluded from the study.

The collected data included the personal data of patients, the number of domperidone prescriptions that were prescribed during different months of the study, the prescribed dosage forms of domperidone, the duration of domperidone use, the level of prescribers who prescribed domperidone, the type of domperidone prescriptions, and the departments that prescribed domperidone.

The data were collected and analyzed by Excel spreadsheet and the descriptive data were represented as numbers and percentages. This study was approved by the ethical committee of Ministry of Health.

RESULTS and DISCUSSION

During the study period between January 2018 to June 2018, 173 patients received domperidone. More than 54% of the patients were males and the age of most of them was less than 20 years (61.85%). Table 1 shows the personal data of the patients.

Table 1. The personal data of the patients.

Variable	Category	Number	Percentage
Gender	Male	94	54.34
	Female	79	45.66
Age	Less than 10	61	35.26
	10-19	46	26.59
	20-29	24	13.87
	30-39	15	8.67
	40-49	9	5.20
	50-59	7	4.05
	More than 60	11	6.36
	Nationality	Saudi	143
	Non- Saudi	30	17.34

Table 2 shows the number of the prescriptions that contained domperidone during different months of the study. More than 26% of the prescriptions were prescribed in March and 24.28% were prescribed in April.

Table 2. The number of the prescriptions that contained domperidone.

Month	Number	Percentage
January	23	13.29
February	20	11.56
March	46	26.59
April	42	24.28

May	25	14.45
June	17	9.83

Table 3 shows the prescribed dosage form of domperidone. More than 52% of the patients received suspension dosage form.

Table 3. The prescribed dosage form of domperidone.

Dosage form	Number	Percentage
Suspension	90	52.02
Tablet	83	47.98

Table 4 shows the duration of domperidone use. More than 27% of the patients used domperidone for 3 days and 23.12% of them used it for 7 days.

Table 4. The duration of domperidone use.

Duration	Number	Percentage
1 Day	34	19.65
2 Days	12	6.94
3 Day	48	27.75
5 Days	16	9.25
7 Days	40	23.12
10 Day	6	3.46
20 Day	1	0.58
1 Month	12	6.94
3 Month	4	2.31

Table 5 shows the level of prescribers who prescribed domperidone. Most of the prescriptions were written by residents (97.11%).

Table 5. The level of prescribers.

Prescribers Level	Number	Percentage
Specialist	2	1.16
Resident	168	97.11
Consultant	3	1.73

Table 6 shows the type of domperidone prescriptions. Most of the prescriptions were regular prescriptions (89.02%).

Table 6. The type of domperidone prescriptions.

Type of the prescription	Number	Percentage
Regular	154	89.02
V.I.P	1	0.58
Urgent	11	6.36

Emergency	7	4.04
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Table 7 shows the departments that prescribed domperidone. Most of the prescriptions were prescribed by emergency department (89.02%).

Table 7. The departments that prescribed domperidone.

Department	Number	Percentage
Emergency	154	89.02
Nephrology	2	1.16
Internal Medicine	6	3.46
Gastroenterology	11	6.36

The present study showed that domperidone was prescribed commonly in the outpatient setting. Domperidone is a medicine commonly used to treat stomach problems such as gastrointestinal reflux disease [12]. European Medicines Agency stated that domperidone is frequently used across Europe [13]. Tang et al informed that domperidone is commonly prescribed for children with gastroesophageal reflux disease [14]. Moreover, the Canadian Digestive Health Foundation reported that domperidone is one of the most frequently prescribed medicines for gastroparesis, and usually the first treatment option that is offered [15].

More than 52% of the patients received suspension dosage form. This is rational as most of the patients in the present study were children or young people. More than 50% of the patients used domperidone for 3 days or 7 days. This is also rational because it is generally prescribed for a short time only (usually up to 1 week) [5]. Hall reported that domperidone is used for the prevention of nausea and vomiting and the duration of treatment was limited to seven days [16]. The Medicines and Healthcare Products Regulatory Agency now recommends that domperidone is only used for the short term treatment of nausea and vomiting and that the maximum daily dose for adults should not exceed thirty milligrams and the treatment duration should not exceed seven days [17].

Most of the prescriptions that were included in the present study were written by residents (97.11%). Domperidone should be given under the immediate supervision of the doctor and is generally a safe medication. So it could be prescribed by residents. Furthermore, most of the prescriptions were

prescribed by emergency department and this is also rational as several patients who visit the emergency department suffer from vomiting or nausea and they received one of the antiemetic agents such as domperidone.

CONCLUSION

The present study showed that domperidone was prescribed commonly in the outpatient setting. More studies are needed to explore the frequency of its prescribing in other settings and to explore the appropriateness of its use in different settings.

REFERENCES

1. Fallon R, Boulger S, Fraser C, Moriarty K. Recommended drug options for nausea and vomiting. *Prescriber*. 2010;21:18-33.
2. Singh P, Yoon SS, Kuo B. Nausea: a review of pathophysiology and therapeutics. *Therap Adv Gastroenterol*. 2016;9:98-112.
3. Medicalnewstoday. Types and side effects of antiemetic drugs. Cited 05 December 2021. Available: <https://www.medicalnewstoday.com/articles/320384#types>.
4. NPS. Antiemetic drugs: what to prescribe and when. Cited 05 December 2021. Available: <https://www.nps.org.au/australian-prescriber/articles/antiemetic-drugs-what-to-prescribe-and-when>.
5. NHS. Domperidone. Cited 05 December 2021. Available: <https://www.nhs.uk/medicines/domperidone/>.
6. Drugbank. Domperidone. Cited 05 December 2021. Available: <https://go.drugbank.com/drugs/DB01184>.
7. MayoClinic. Domperidone (Oral Route). Cited 05 December 2021. Available: <https://www.mayoclinic.org/drugs-supplements/domperidone-oral-route/side-effects/drg-20063481?p=1>.
8. Patient.info. Domperidone for sickness. Cited 05 December 2021. Available: https://patient.info/medicine/domperidone-for-sickness-motilium_

9. Medicinenet. Domperidone (oral). Cited 05 December 2021. Available: <https://www.medicinenet.com/domperidone-oral/article.htm>.
10. Medicines. Domperidone 10mg Tablets. Cited 05 December 2021. Available: <https://www.medicines.org.uk/emc/product/556/smpc#gref>.
11. Srishyla MV, Mahesh K, Nagarani MA, Andrade C, Venkataraman BV. Prescription audit in an Indian hospital setting using the DDD (defined daily dose) concept. *Indian J. Pharmacol.* 1994;26(1), 23.
12. Aboutkidshealth. Domperidone to increase milk production. Cited 05 December 2021. Available: <https://www.aboutkidshealth.ca/Article?contentid=127&language=English>.
13. EMA. Domperidone. Cited 05 December 2021. Available: https://www.ema.europa.eu/en/documents/referral/domperidone-article-31-referral-notification_en.pdf.
14. Tang KL, Mokhti FA, Fong JY, Anwar HK. Domperidone-Related Acute Dystonia in a Young Child With Underlying Abnormal Electroencephalogram. *Int. J. Clin. Pediatr.* 2020;9(2):55-8.
15. CDHF. Medications for gastroparesis. Cited 05 December 2021. Available: <https://cdhf.ca/digestive-disorders/gastroparesis/medications-for-gastroparesis/>.
16. Hall W. Improving the safety of prescriptions of domperidone in primary care: implementing MHRA advice. *BMJ Qual Improv Rep.* 2016;5(1):u209711.w4039.
17. MHRA. Domperidone: risks of cardiac side effects. Drug Safety Update. Cited 05 December 2021. Available: <https://www.gov.uk/drug-safety-update/domperidone-risks-of-cardiac-side-effects>.